Quality Uncompromised
ROTEL®

Technical Manual

STEREO POWER AMPLIFIER
RB-890

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Specifications

Continuous Power Output	160 watts* per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion.
Power Output (BTL)	360 watts (mono) min. RMS driven into 8 ohms from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion.
Total Harmonic Distortion (20 to 20,000 Hz)	No more than 0.03% (continuous rated power output) No more than 0.03% (continuous 1/2 rated power output) No more than 0.03% (1 watt per channel power output, 8 ohms)
Intermodulation Distortion (60 Hz : 7 kHz = 4 : 1)	No more than 0.03% (continuous rated power output) No more than 0.03% (continuous 1/2 rated power output) No more than 0.03% (1 watt per channel power output, 8 ohms)
Output : Speaker	4-16 ohms
Damping Factor	380 (20 to 20,000 Hz, 8 ohms)
Input Sensitivity/Impedance	1.0V/22 kohms
Frequency Responce	15 to 130,000 Hz, +0 dB, −1 dB
Signal-to-Noise Ratio (IHF, A network)	120 dB
Power Requiement	120V/60 Hz, 220V/50 Hz, 240V/50 Hz, or 120, 220, 240V/50–60 Hz (depending on destinations)
Power Consumption	800 watts
Dimensions (overall)	430(W) × 109(H) × 349(D) mm 16-15/16" × 4-7/32.. × 13-3/4"
Weight (net)	13 kg/28.7 lbs.

- Specifications and design subject to possible modification without notice.
- *Measured pursuant to the Federal Trade Commission's Trade Regulation Rule on Power Claims for Amplifiers (applicable to the U.S.A. only).

Serial No.
Beginning

THE ROTEL CO., LTD.
ROTEL ELECTRONICS CO., LTD.

1-36-8 OHOKAYAMA, MEGURO-KU, TOKYO 152, JAPAN
3RD FLOOR, ROTEL BLDG., NO. 35 FUSHING, NORTH ROAD, TAIPEI, TAIWAN, REPUBLICK OF CHINA

Parts List

Schematic Location	Computer No.	Description
	TRANSISTORS, DIODES AND IC'S	
Q601	0322SA1016K-FG	
Q602	0322SA1016K-FG	
Q603	0322SA1016K-FG	
Q604	0322SA1016K-FG	
Q605	0322SA1016K-FG	
Q606	0322SA1016K-FG	
Q607	0332SA1208-RST	
Q608	0332SA1208-RST	
Q609	☆0332SC2910-RST	
Q610	☆0332SC2910-RST	
Q611	☆0322SC536K-FG	
Q612	☆0322SC536K-FG	
Q613	☆0332SC2910-RST	
Q614	☆0332SC2910-RST	
Q615	0322SD600K-EF	
Q616	0322SD600K-EF	
Q617	0332SC2344-DE	Driver
Q618	0332SC2344-DE	Driver
Q619	0332SA1011-DE	Driver
Q620	0332SA1011-DE	Driver
Q621	0332SC2706-OY or 0332SD1047-DE	Power Driver
Q622	0332SC2706-OY or 0332SD1047-DE	Power Driver
Q623	0332SC2706-OY or 0332SD1047-DE	Power Driver
Q624	0332SC2706-OY or 0332SD1047-DE	Power Driver
Q625	0332SC2706-OY or 0332SD1047-DE	Power Driver
Q626	0332SC2706-OY or 0332SD1047-DE	Power Driver
Q627	0332SC2706-OY or 0332SD1047-DE	Power Driver
Q628	0332SC2706-OY or 0332SD1047-DE	Power Driver
Q629	0332SA1146-OY or 0332SB817-DE	Power Driver
Q630	0332SA1146-OY or 0332SB817-DE	Power Driver
Q631	0332SA1146-OY or 0332SB817-DE	Power Driver
Q632	0332SA1146-OY or 0332SB817-DE	Power Driver
Q633	0332SA1146-OY or 0332SB817-DE	Power Driver
Q634	0332SA1146-OY or 0332SB817-DE	Power Driver
Q635	0332SA1146-OY or 0332SB817-DE	Power Driver
Q636	0332SA1146-OY or 0332SB817-DE	Power Driver
Q901	0322SC2362K-FG	
D601	☆0341S1588	
D602	☆0341S1588	
D603	☆0341S1588	
D604	☆0341S1588	
D605	0341S1588	
D606	0341S1588	
D607	0341S1588	
D608	0341S1588	
D609	034DS135C	
D610	034DS135C	
D611	034DS135C	
D612	034DS135C	
D901	0341S1588	
D902	0341S1588	
D903	034DS135C	
D001	034SEL1124R	Protection Ind.
D002	034SEL1124R	Power Ind.
D003	034KBPC10-04	Rectifier
D004	034KBPC10-04	Rectifier
	VARIABLE RESISTORS	
VR601	051SF687A-2K	Bias Adj.
VR602	051SF687A-2K	Bias Adj.
	OTHERS	
TH602	034TD5C350D	Temperature Compensator
C001	041C-4315A01	Capacitors : 80V 15000μF
C002	041C-4315A01	Capacitors : 80V 15000μF
C003	041C-4315A01	Capacitors : 80V 15000μF
C004	041C-4315A01	Capacitors : 80V 15000μF
C005	044NSK135	Safety Capacitors (STD)
	044PME265MA447	Safety Capacitors (Europe)
	044NSK132	Safety Capacitors (Hydro)
T001	022T-1011G01	Power Transformer
S001	061C-4176A02	Power Sw : ESB997 TV-8
RY901	063ORZ-SS224L	Protection Relay
	☆0674TR-2267	Speaker Terminal
	0194TR-2274	Foot
	011PC4-01A00	Front panel
	0143TUV-6#3	Upper Cover
	066C-4225A04	2P Pin Jack
	0673TR2045#3	Speaker Terminal (RED)
	0673TR2045#4	Speaker Terminal (BLACK)

☆MARK USED BEFOR SERIAL NO. 125749

Adjustment

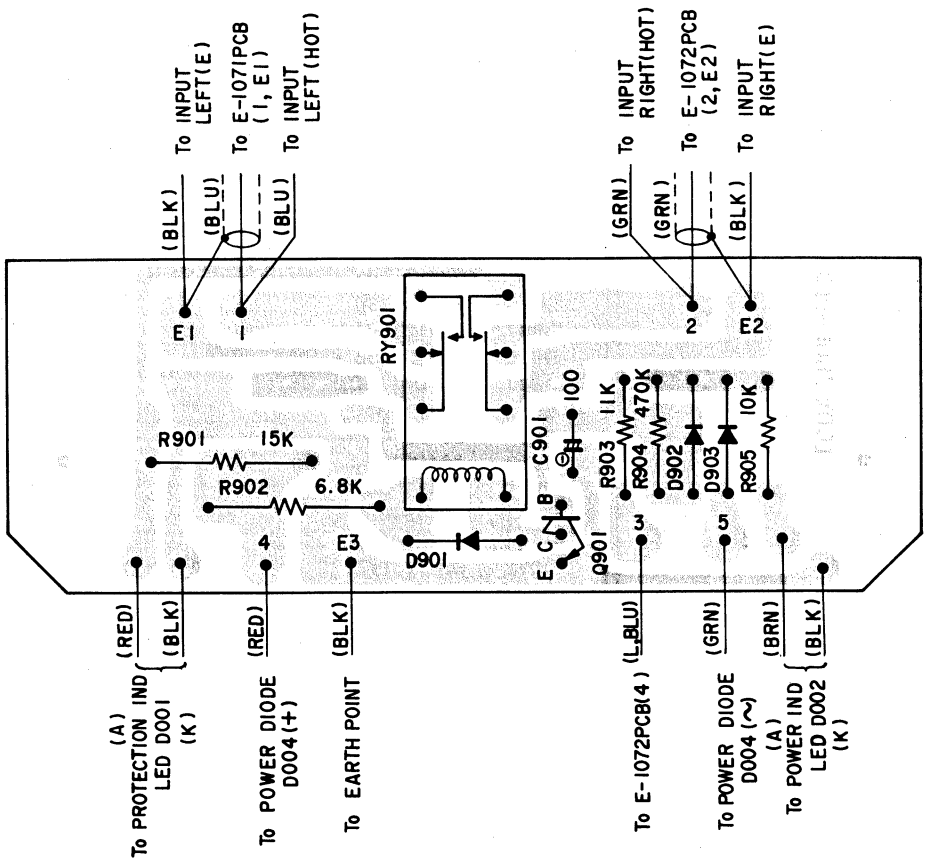
Power Amplifier Bias Adjustment

Instruments : DC milli-voltmeter

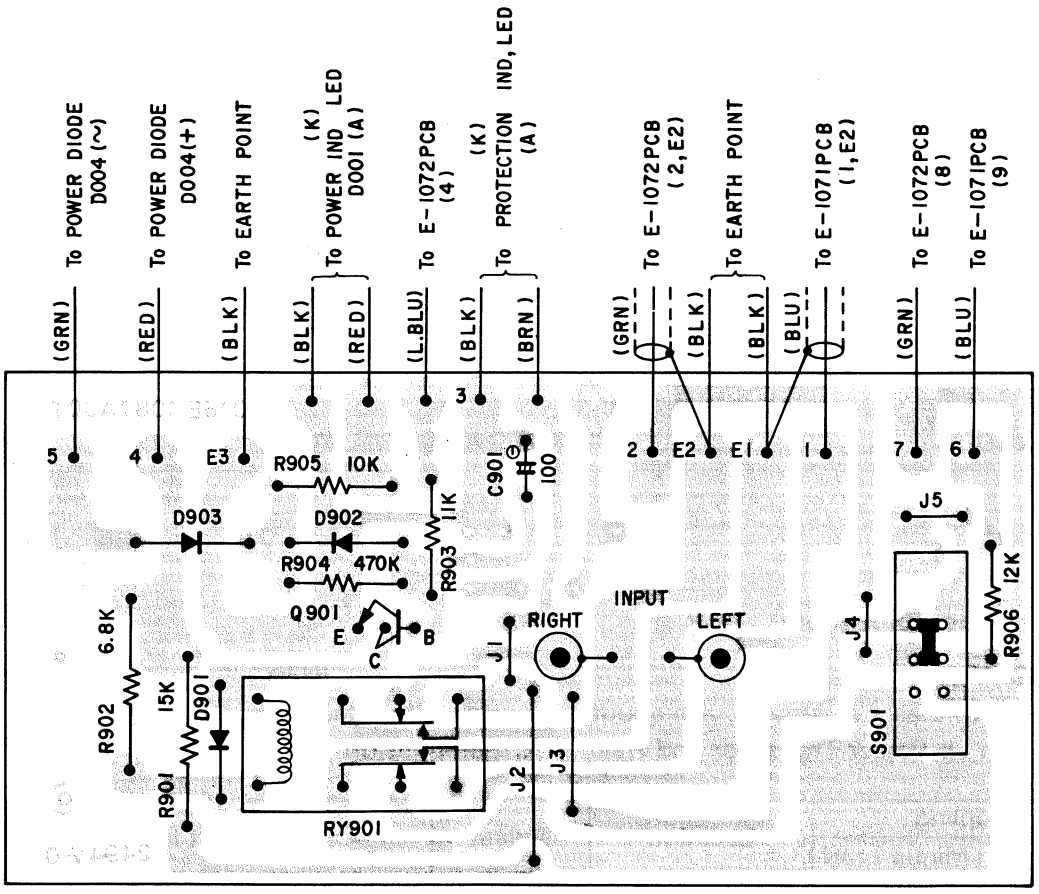
Notes : Prior to Bias Adjustment, run about 5 minutes with rated output (8 ohms) and warm up Power Transistor and Heat Sink. Set input off.

Step	Coupling		Location	Adjust	Adjust for
	Plus Lead	Minus Lead			
1	TP1	TP3	016E-1071 PCB	VR601	DC milli-voltmeter reads 4.4 mV
2	TP2	TP4	016E-1072 PCB	VR602	

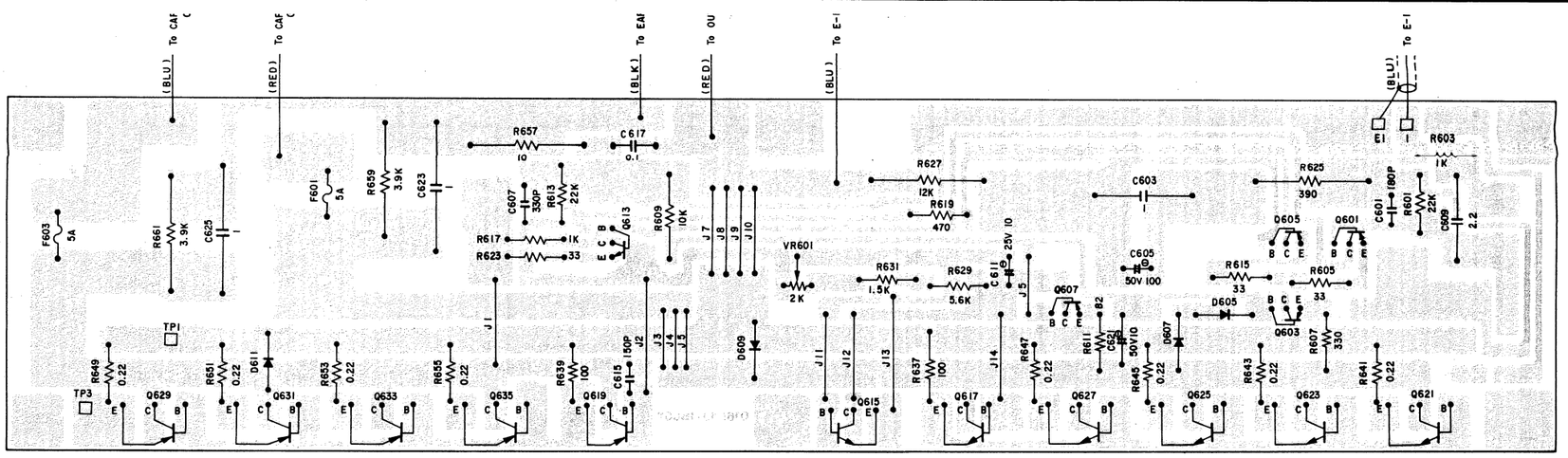
Wiring Diagram



Before Serial No. 125749

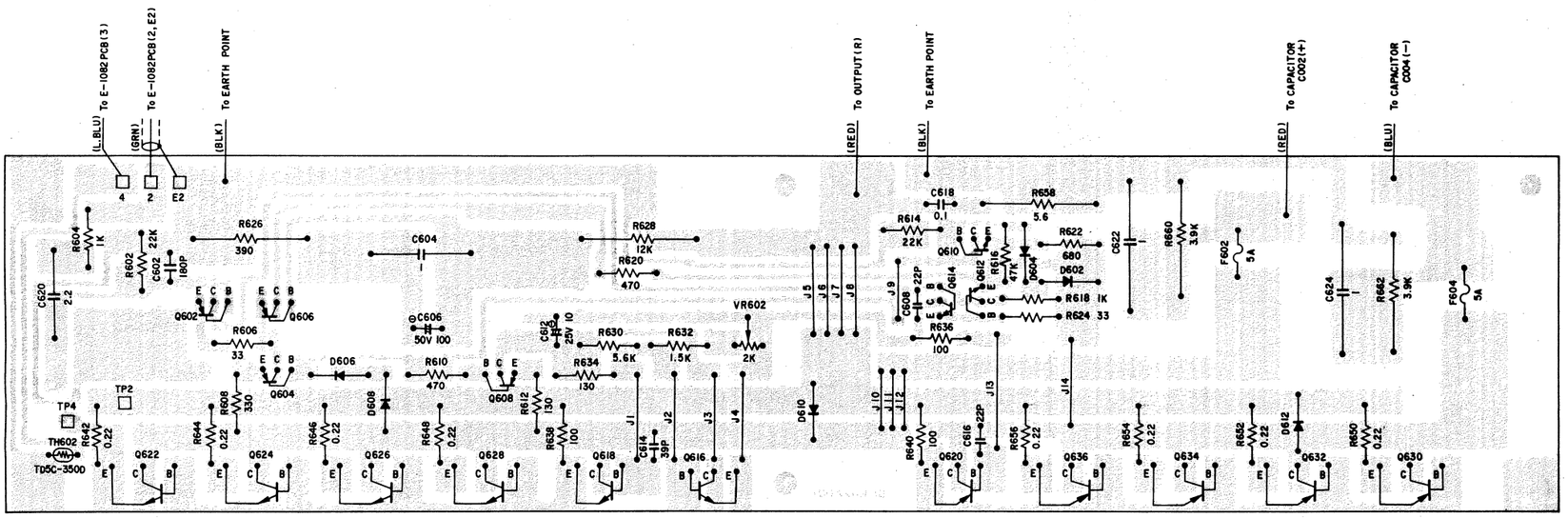


After Serial No.126300



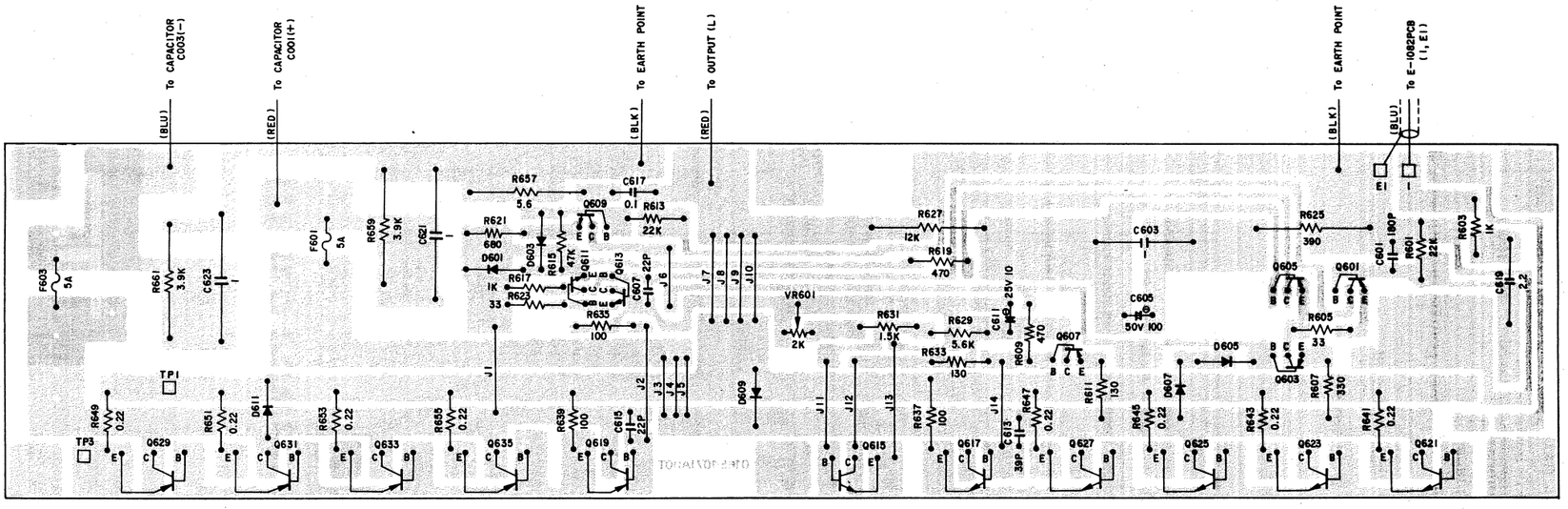
After Serial No.126300

E-1071B PCB



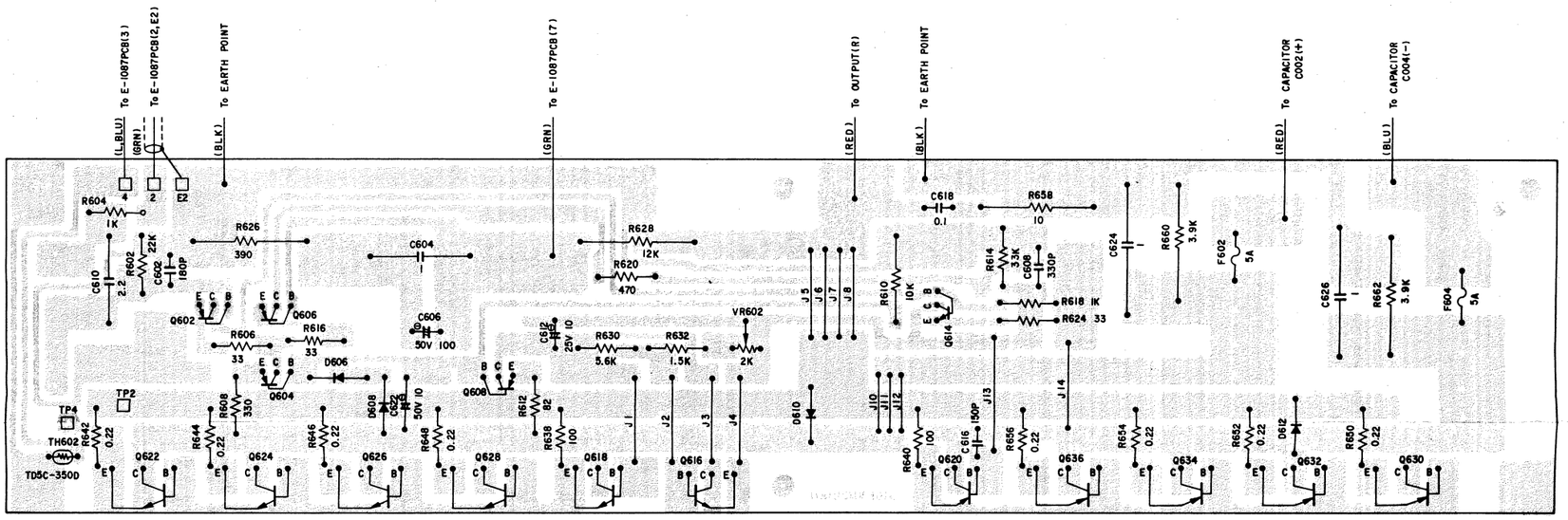
Before Serial No. 125749

E-1072A PCB

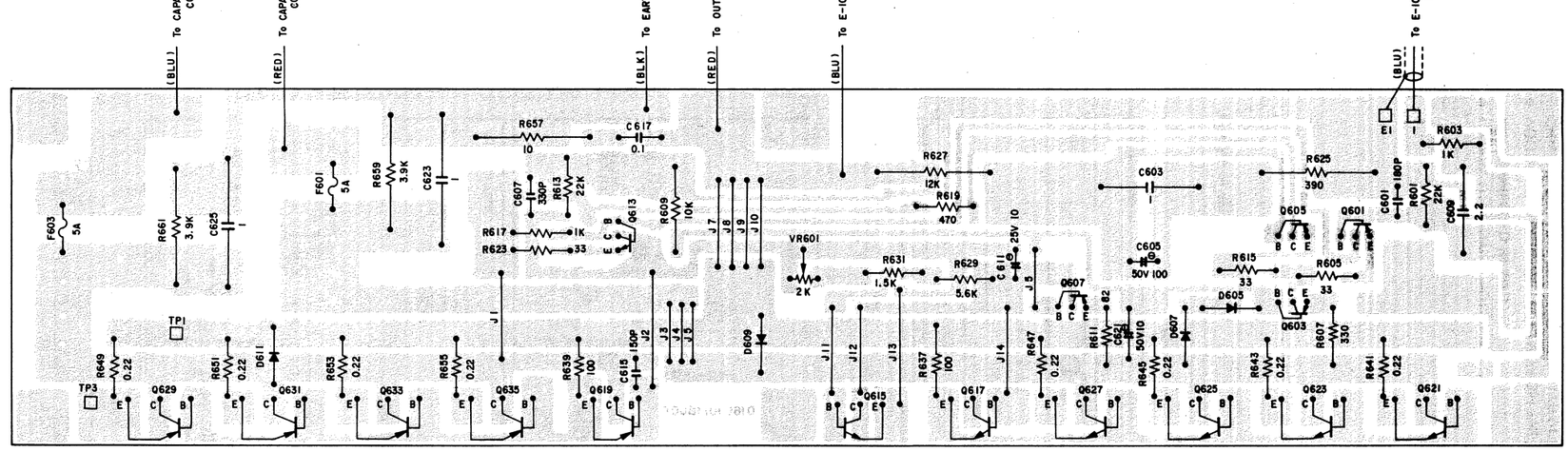


Before Serial No. 125749

E-1071A PCB

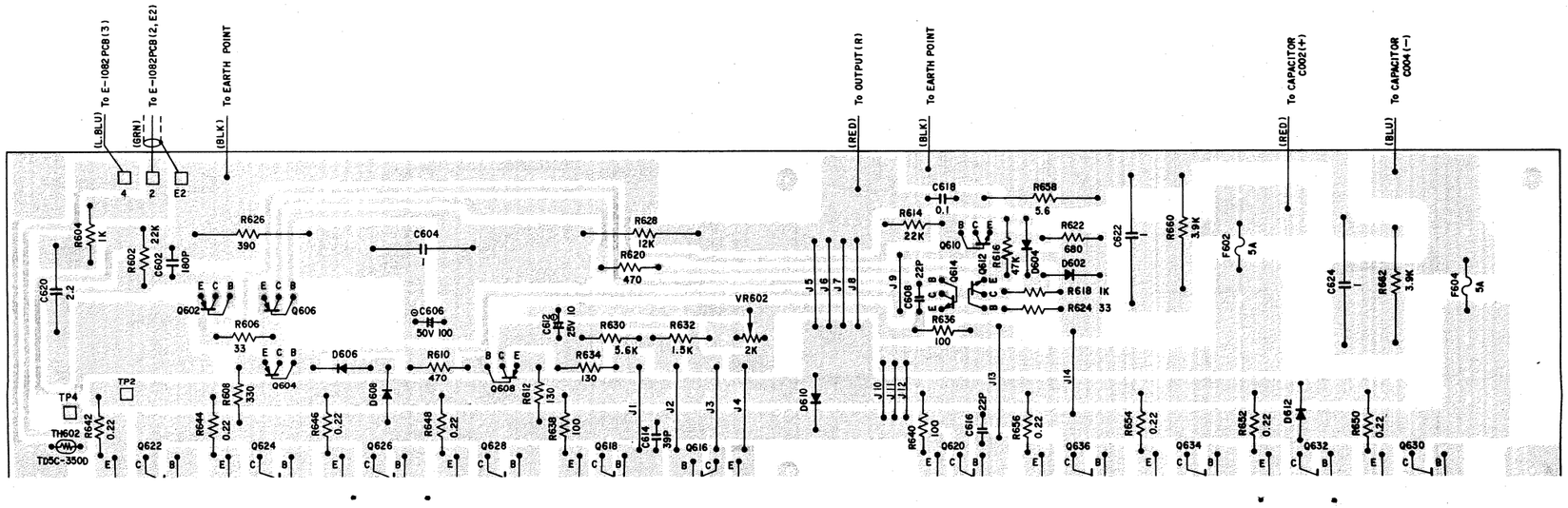


E-1072B PCB

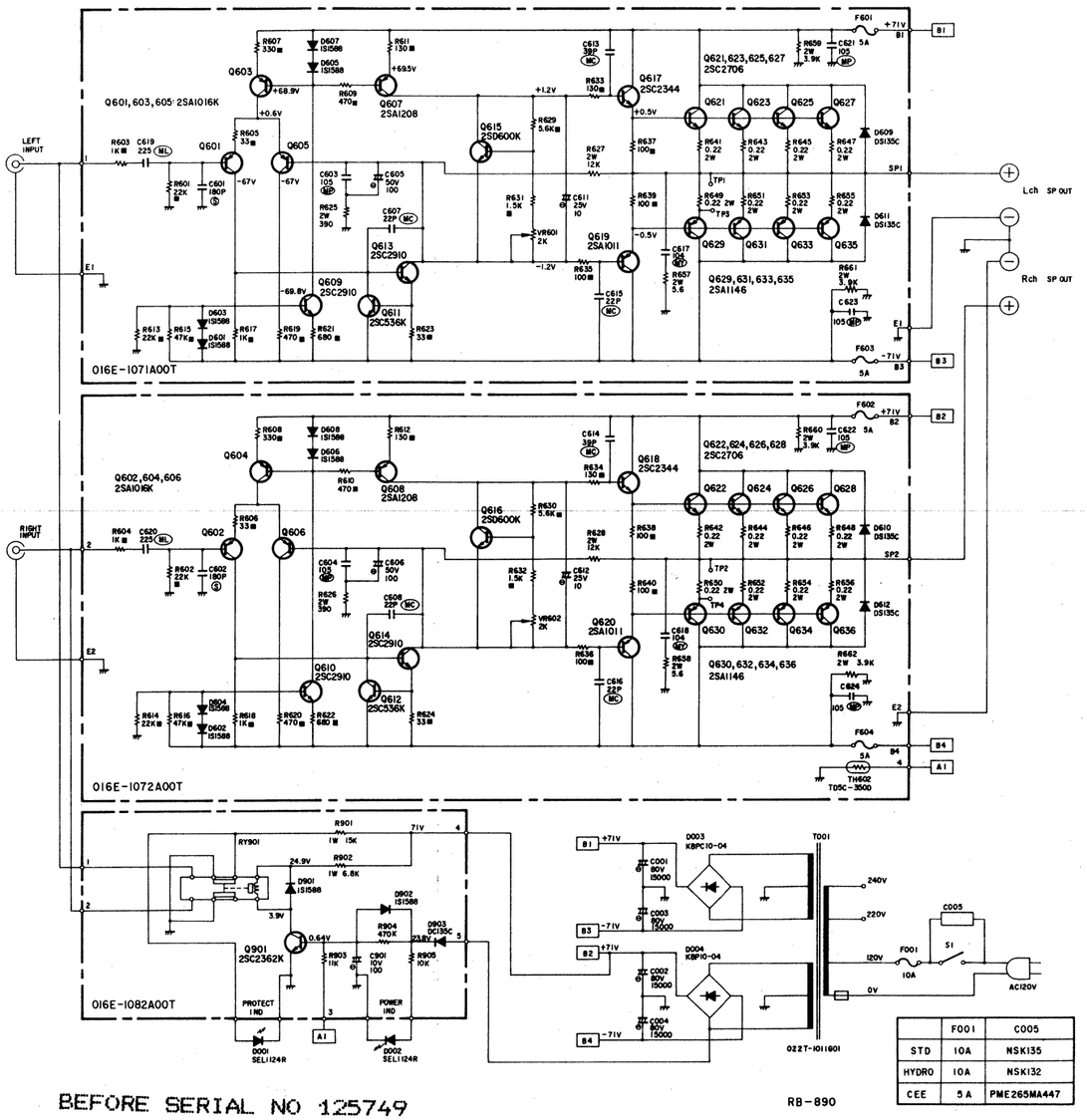


After Serial No.126300

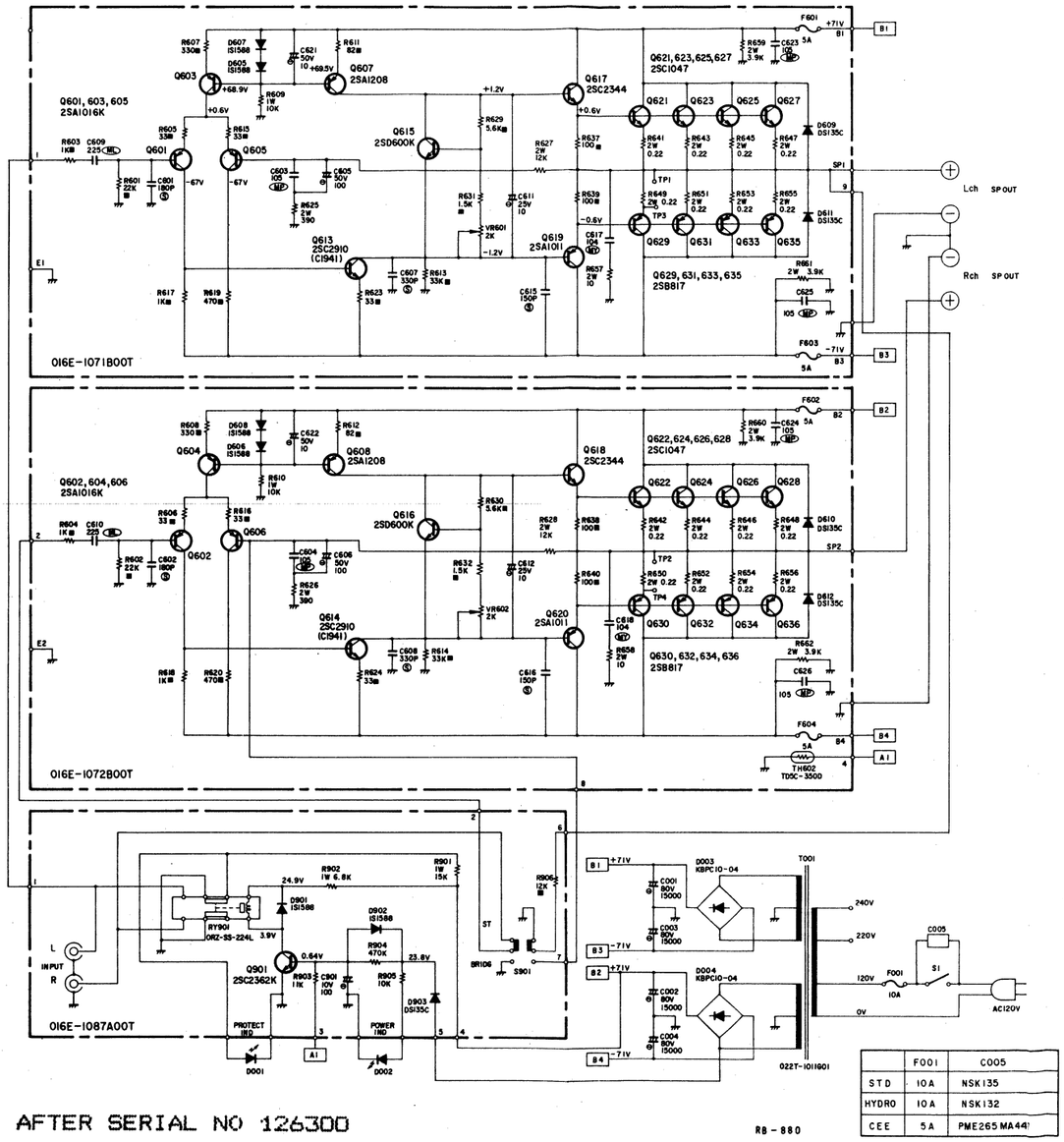
E-1071B PCB



Schematic Diagram



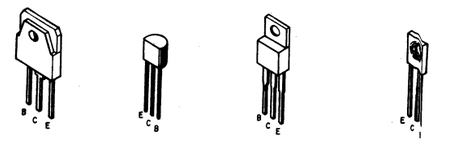
BEFORE SERIAL NO 125749



AFTER SERIAL NO 126300

(RESISTORS)
5% TOLERANCE UNLESS OTHERWISE NOTED.
K ..... KILO OHM
■ ..... FIXED PRECISION METAL FILM RESISTORS. (F) : 1%
NON MARK ..... LOW NOISE TYPE CARBON RESISTORS. 1/4 WATT

(CAPACITORS)
Ⓢ ..... POLYSTYRENE FILM CAPACITORS.
Ⓜ ..... MYLAR FILM CAPACITORS.
Ⓜ ..... METALIZED POLYSTER FILM CAPACITORS.
⊣⊢ ..... ELECTOROLYTIC CAPACITORS.
NON MARK ..... CERAMIC CAPACITORS.
Ⓜ ..... METAL LAYER CAPACITORS
Ⓜ ..... MICA CAPACITORS



- UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITANCE VALUES ARE EXPRESSED IN MFD.
- VOLTAGE READING WITH VTVM FROM THE POINT SHOWN TO THE CHASSIS GROUND. (LINE VOLTAGE 120 VOLTS)
- VOLTAGE READING MAY ±20%